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Keywords: Cervical dystonia; Spasmodic torticollis; Botulinum toxin; IncobotulinumtoxinA

Background.– Current prescribing information recommends botulinum toxin (BoNT) treatment intervals for cervical dystonia (CD) ≥ 12 weeks (≥ 10 weeks for incobotulinumtoxinA European labelling). However, many patients experience recurrence of symptoms before 12 weeks have elapsed.

Methods.– A cross-sectional survey of patients with CD collected data on BoNT treatment intervals received and preferred intervals [1]. These were compared with intervals from an incobotulinumtoxinA clinical study in CD where patients were re-injected at flexible intervals ≥ 6 weeks based on patients' requests and investigator-confirmed clinical need for retreatment [2].

Results.– Most (78.4%) patients in the survey ($n=136$) preferred treatment intervals ≤ 12 weeks; 46.3% preferred intervals ≤ 10 weeks. However, 47.1% of survey patients received intervals ≤ 12 weeks; 4.4% received intervals ≤ 10 weeks. In the clinical study, 821 incobotulinumtoxinA treatments were given at intervals of 6–20 weeks; 44.9% of treatments were given at intervals.

Conclusions.– Many patients with CD would like individualised BoNT treatment regimens. When flexible treatment intervals are permitted, many patients choose shorter or longer intervals than the 12-week standard-of-care interval.

References

[1] Sethi, et al. J Med Econ 2012;15:419–23.

[2] Evidente et al. Manuscript in preparation.

<http://dx.doi.org/10.1016/j.rehab.2014.03.178>

P219-e

**Complications of intrathecal baclofen pump:
A case report**

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Keywords: Intrathecal baclofen infusion system; spasticity; intrathecal baclofen pump complications; baclofen withdrawal.

Background.– Intrathecal baclofen (ITB) infusion has become a common treatment for severe spasticity. Many complications of these drug delivery systems have been reported, such as those related to improper dosing, mechanical failure of the implanted pump or catheter, or postoperative wound issues.

Results.– A 47-year-old man, with spastic paraplegia due to D4 ASIA A spinal cord injury and right upper brachial plexus lesion, with a double barrel colostomy to heal a perineal pressure sore, presented an abdominal wound dehiscence with partial exposure of the ITB pump (350 μ g/day, continuous), associated with signs and symptoms of acute baclofen withdrawal, and eventual sepsis. As a result, the patient underwent removal of the baclofen infusion system, closure with plastic skin surgery, and placement of a new ITB infusion system (SynchroMed II, Medtronic), with the pump placed in the right abdominal region.

Conclusions.– Patients with baclofen pumps require periodic monitoring, not only by the need to fill the pump, but also to assess the risk of complications related to dosing or mechanical implant dysfunction, which can be serious and life-threatening. It is important to inform patients about possible risks and complications of this device in order to be aware of warning symptoms.

<http://dx.doi.org/10.1016/j.rehab.2014.03.179>

P220-e

**Preliminary assessment of the benefits of
combining incobotulinumtoxinA (Xeomin®)
with conventional rehabilitation therapy on
the function of people with chronic
post-stroke spasticity**

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Background.– We evaluated whether patients with longstanding upper extremity (UE) post-stroke spasticity gain functional improvements through task-oriented rehabilitation therapy combined with Xeomin (incobotulinumtoxinA) injections.

Methods.– Eleven consecutive patients (aged 37–80 years) with UE spasticity ≥ 2 years post-stroke (mean, 6.2 years; range, 2–24 years) and a Modified Ashworth Scale (MAS) score > 3 for two joints received conventional rehabilitation therapy combined with Xeomin (three treatments per year administered by the same physician using electromyographic guidance). Xeomin dose (target range 130–400 U) and injected muscles depended on UE muscles involved. Outcome measures included Disability Assessment Scale (DAS), muscle tone (using MAS) and range of motion (ROM), assessed before and 1, 6 and 12 months after the first Xeomin treatment.

Results.– After one year of rehabilitation therapy and Xeomin treatments, mean DAS score improved from 1.6 to 0.9, mean MAS score decreased from 3.3 to 1.8 and mean ROM score increased from -22.5 to -7.7 ($P < 0.0001$ for all; ANOVA). No adverse events occurred.

Conclusions.– In patients with longstanding UE post-stroke spasticity, Xeomin combined with conventional rehabilitation therapy improved disability, muscle tone and ROM and was well tolerated. Activities of daily living were improved after the paralytic effects of Xeomin had largely diminished.

<http://dx.doi.org/10.1016/j.rehab.2014.03.180>

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**Sonoelastographic evaluation of forearm
muscles spasticity**

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Keywords: Sonoelastography; Forearm muscles; Spasticity

Background.– Sonoelastography (SE), which is an ultrasound-based technique, can assess tissue elasticity. The objective of the study is to assess forearm muscles spasticity in patients with stroke.

Methods.– Twenty-three stroke patients (17 males %73,9; 6 females %26,1) who had spasticity in forearm muscles (pronator teres, flexor carpi radialis, flexor carpi ulnaris, flexor digitorum superficialis, flexor carpi ulnaris) were evaluated with ultrasonography. Elasticity Index (E), which indicates the tissue elasticity, was measured using SE. E value ranged from 0 to 6 (6 indicates hardest tissue). The bulkiest part of the muscles in short axis was targeted for the measurement. SE findings in affected side were compared with unaffected side.

Results.– E values and E ratio were higher in affected forearm muscles compared to unaffected forearm muscles ($P < 0.05$).

Conclusions.– The results of the study suggested that SE could be used to assess spasticity in forearm muscles.

<http://dx.doi.org/10.1016/j.rehab.2014.03.181>

P222-e

**Pain during botulinum toxin injections in
spastic adults: Influence of the procedure**

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